

REMARKS

This is in response to the Office Action mailed 12/01/2004. In the Office Action, (i) claims 11-13, 19, 40-42, and 46 were rejected under 35 USC 112, 2nd Paragraph; (ii) claims 1-4, 9, 16-18, 21-22, 24-26, 29-33, 38, 44-45, and 47 were rejected under 35 USC 102(e); (iii) claims 5, 6, 10-14, 19-20, 23, 34-35, 39-43, 46-47 were rejected under 35 USC 103(a); and (iv) claims 7, 8, 36, and 37 were indicated as being allowable but objected for being dependent and including redundant limitations.

Reexamination and reconsideration of this case is respectfully requested in view of the foregoing amendments and the following remarks.

In this response, Claims 1-4, 6-14, 17, 19-22, 24-26, 30-33, 35-44, and 46-47 have been amended. Claims 5, 29, and 34 have been cancelled without prejudice. Claims 48-51 have been added. Claims 27-28 were previously cancelled. Accordingly, claims 1-4, 6-26, 30-33, and 35-51 remain at issue in the patent application. Of those pending, claims 1, 21, and 31 are independent claims.

Applicant believes that no new matter has been added by this preliminary amendment.

I) TITLE

The title of the invention was objected to for not being descriptive. [Office Action, Section 2, page 2].

Applicant has amended the title to "ILLUMINATION DEVICE HAVING ROTATABLE ACRYLIC ROD"

Applicant believes this amendment to the title of invention now makes this objection moot and respectfully requests its withdrawal.

II) SPECIFICATION

The Specification was objected to for having two different pages identified as page 2. [Office Action, page 2, Section 3].

Applicant respectfully thanks the Examiner for renumbering the second page 2 as page 3 and respectively renumbering the following pages 3-22 to pages 4-23. If a corrected disclosure is requested from Applicant to correct the page numbering, it will be provided.

The Specification was further objected to for not providing a brief description of Figure 1C. [Office Action, page 2, Section 4].

Applicant has amended the specification changing a second brief description of Figure 1A to Figure 1C as suggested by the Examiner.

Applicant has further amended the specification to update the cross referenced application to provide its patent number now that it has issued into a patent.

Withdrawal of the foregoing objections to the specification is respectfully requested.

III) CLAIM OBJECTIONS - REDUNDANT LIMITATION

Claims 7-8 and 36-37 were objected to due to informalities. [Office Action, Page 3, Section 5].

Applicant has amended claims 7-8 and 36-37 to eliminate the limitation of "frequency".

Applicant believes this amendment to claims 7-8 and 36-37 now makes this objection moot and respectfully requests its withdrawal.

IV) CLAIM REJECTIONS - 35 USC § 112, 2nd paragraph

Claims 11-13, 19, 40-42, and 46 were rejected under 35 USC § 112, second paragraph as being indefinite. [Office Action, Page 3, Sections 6-8] Applicant respectfully traverses this rejection.

Applicant has amended claims 11-13, 19, 40-42, and 46 to clarify the claimed invention.

Claims 11-13 and 40-42 have been amended to clarify that "a diameter of a circular cylindrical cross-section" is associated with the "rotatable acrylic rod" of the independent claim from which they depend.

Applicant believes this amendment now makes this rejection moot and respectfully requests the withdrawal of this 35 U.S.C. § 112, second paragraph claim rejection of claims 11-13, 19, 40-42, and 46.

V) CLAIM AMENDMENTS

Applicant has amended Claims 1-4, 6-14, 17, 19-22, 24-26, 30-33, 35-44, and 46-47. Some amendments to dependent claims were previously discussed.

Independent claims 1, 21 and 31 have been amended to clarify that Applicant's acrylic rod is a **rotatable** acrylic rod and how it functions. (emphasis added) That is, the rotatable acrylic rod rotates to change a direction of radiation of light.

Independent claims 1 and 31 have been further amended to clarify that the one or more electrical-to-optical converters are one or more light emitting diodes (LEDs) and not incandescent light bulbs by substituting light emitting diodes (LEDs) in place of electrical-to-optical converters.

Independent claims 1 and 31 have been further amended to clarify how the optical axis of each of the one or more light emitting diodes (LEDs) is substantially in parallel with the central optical axis (which may also be the center axis) of the rotatable acrylic rod. [For example, see Applicant's Figure 4 and the description thereof]. The optical axis of each of the one or more light emitting diodes (LEDs) is the axis along which the one or more LEDs substantially emit photons. For example, the incident light ray 410 illustrates an optical axis along which one of the LEDs may emit photons.

Dependent claims 2-4, 6-14, 17, 19-20, 22, 24-26, 32-33, 35-44, and 46-47 have been amended accordingly to the amendments made to the independent claims from which they depend.

The dependency of claim 30 has been corrected to depend from dependent claim 22 and its limitations have been amended

accordingly, further taking into account the amendments made to independent claim 21.

The limitations of dependent claim 5 have been added into independent claim 1. The limitations of dependent claim 29 have been added into independent claim 21. The limitations of dependent claim 34 have been added into claim 31. Accordingly, Claims 5, 29, and 34 have been cancelled without prejudice.

VI) CLAIM REJECTIONS - 35 USC § 102

Claims 1-4, 9, 16-18, 21-22, 24-26, 29-33, 38, 44-45, and 47 were rejected under 35 USC § 102(e) as being anticipated by U.S. Pat. No. 6,135,621 issued to Kent Bach ("Bach"). [Office Action, Page 5, Section 9] Applicant respectfully traverses this rejection.

Regarding independent claims 1, 21, and 31, the Office Action alleges that Bach "discloses an illumination device having:

- an acrylic rod (as recited in claims 1 and 31), Figure 4, reference number 12;
- the rod being rotatable (as recited in claims 1 and 31), as evidenced by Figure 4;
- the rod having a first end (as recited in claims 1 and 31), Figure 4, reference number 11 ;
- the rod having a second end (as recited in claims 1 and 31), Figure 4, reference number 13;
- a first circuit board (as recited in claims 1 and 31), as seen in Figure 4;

- at least one electrical-to-optical converter to generate photons (as recited in claims 1 and 31), Figure 4, reference number 14;
- the first circuit board including the at least one electrical-to-optical converters (as recited in claims 1 and 31), as seen in Figure 4;
- a first end housing (as recited in claims 1 and 31), Figure 4, reference number 24;
- the first end housing having a first opening (as recited in claims 1 and 31), as seen in Figure 4;
- the first end of the acrylic rod being inserted through the first opening (as recited in claims 1 and 31), column 2, lines 31-35;
- the acrylic rod being rotatable within the first end housing (as recited in claims 1 and 31), as evidenced by Figure 4;
- the first end housing being used to house the first circuit board (as recited in claims 1 and 31), column 2, lines 31-35;
- the first end housing being used to align the electrical-to optical converters with the first opening and the first end of the acrylic rod (as recited in claims 1 and 31), as seen in Figure 4." [Office Action, page 5, line 14 through page 6, line 17].

Applicant respectfully disagrees.

Regarding independent claim 31, the Office Action further alleges that Bach further discloses:

- "- a second circuit board (as recited in claims 4 and 31), as seen in Figure 4;
- the second circuit board including the at least one electrical-to-optical converters (as recited in claims 4 and 31), Figure 4, reference number 32;
- a second end housing (as recited in claims 4 and 31), Figure 4, reference number 24;

- the second end housing having a second opening (as recited in claims 4 and 31), as seen in Figure 4;
- the second end of the rod being inserted through the second opening (as recited in claims 4 and 31), column 2, lines 31 -35;
- the rod being rotatable within the second end housing (as recited in claims 4 and 31), as evidenced by Figure 4;
- the second end housing being used to house the second circuit board (as recited in claims 4 and 31), column 2, 31-35;
- the second end housing being used to align the electrical-to-optical converters with the first opening and the first end of the acrylic rod (as recited in claims 4 and 31), as seen in Figure 4." [Office Action, page 7, lines 1-19].

Applicant respectfully disagrees.

Regarding independent claim 21, the Office Action alleges that its limitations are found inherently disclosed by Bach. [Office Action, page 9, lines 9-10]. Applicant respectfully disagrees.

Applicant has diligently searched Bach and cannot find any support to suggest that Bach's bar 12 is rotatable. Applicant has searched Bach for the words "rotate", "turn", and "rotatable" and can find no occurrence of any of these words. Instead, it appears that Bach's bar 12 does not rotate.

Bach's "first curved mirror 18 surrounds the first light source 14. The first curved mirror 18 is of a diameter smaller than that of the bar 12, and attaches to the first end 11 of and encloses the bar 12." [Bach, Col. 2, lines 15-19]. As illustrated in Fig. 2, Bach's first curved mirror 18 appears to be attached to the first end of the bar 12 and surrounds the light source 14. Moreover, Bach's light source 14 is

perpendicular to Bach's bar 12 such that it seems to prohibit rotation of Bach's bar 12.

Additionally, there seems to be no motivation in Bach to rotate Bach's bar 12 "to change a direction of radiation of light" as is recited in Applicant's amended claims 1 and 31. In Bach, "[w]hen light enters the bar 12, the first lens 16 refracts light in different directions. Light is then incident on a surface 30 of the bar 12 in several locations along its length and spanning the entire circumference of the bar 12. Some of the light is refracted out of the bar 12 through the surface 30." [Bach, Col. 2, lines 46-50]. That is, Bach does not disclose "rotating [a] rotatable acrylic rod to radiate [] photons in a second direction different from [a] first direction" as is recited in Applicant's amended independent claim 21.

For the foregoing reasons, Applicant respectfully submits that Bach does not disclose Applicant's **rotatable** acrylic rod as recited in independent claims 1, 21, and 31. (emphasis added).

Furthermore, Applicant has diligently searched Bach and cannot find any reference to a circuit board. Applicant has searched in Bach for the words "circuit" and "board", as well as the acronym "PCB" for printed circuit board, and can find no occurrence. Instead, it appears that Bach's illuminated handle has no need for a circuit board, as Bach's light sources 14,32 use incandescent light bulbs. As stated in Bach, "[t]he first light source 14 can be an electric bulb suitable for the luminosity required, and may be of different colors." [Bach, Col. 2, lines 12-14]. Moreover, Bach's Figure 4 seems to

illustrate a pair of wires emanating from Bach's light sources 14,32 to directly couple to an AC or DC power source.

Thus, Applicant respectfully submits that Bach does not disclose Applicant's first circuit board as recited in independent claims 1 and 31 and Applicant's second circuit board as recited in independent claim 31.

"To anticipate a claim, the reference must teach every element of the claim." [MPEP § 2131, 8th Edition, Rev. 2, May 2004, Pg. 2100-73]. As Bach does not disclose every element of Applicant's independent claims 1, 21, and 31, it is respectfully submitted that Bach does not anticipate these claims.

Regarding dependent claims 17 and 44, the Office Action alleges that the structural limitations of an electrical-to-optical controller and an on/off switch are inherently disclosed by Bach. Applicant respectfully disagrees.

Bach's light sources 14,32 use incandescent light bulbs that require no control. Moreover, Bach's Figure 4 seems to illustrate a pair of wires emanating from Bach's light sources 14,32 to directly couple to an AC or DC power source.

Regarding dependent claims 18 and 45, the Office Action alleges that Bach's column 1, lines 44-46 discloses Applicant's "intensity selection switch to vary the brightness of the generated light". Applicant respectfully disagrees.

Bach's column 1, lines 44-49 in the "SUMMARY OF THE INVENTION" section, recite "The illuminated handle of the present invention results in increased luminosity of the surface of the bar. It also permits many different lighting effects by varying the diffusion, field of visibility, and brightness of the light. The light can be of different colors, and the bar

may be clear or translucent or color coated." [Bach, Col. 1, lines 44-49]. However, Bach does not disclose the structure of an "intensity selection switch to vary the brightness of the generated light" as recited in Applicant's claims 18 and 45. In contrast, Bach discloses "[t]he body of bar 12 may have within it metalescent flakes or glass dust embedded therein. The surface may also be frosted, or made different colors. This would vary the diffusion and/or visibility of the light to meet the application in which the invention is used." [Bach, Col. 2, lines 26-30].

Regarding dependent claims 22, 24-26, 29, and 30, the Office Action alleges that the additional limitations found in these claims are inherently disclosed by Bach. Applicant respectfully disagrees.

Moreover, dependent claims 2-4, 9, 16-18; 22, 24-26, 29-30; and 32-33, 38, 44-45, and 47 depend respectfully from independent claims 1; 21; and 31. Applicant believes that it has placed independent claims 1, 21, and 31 in condition for allowance such that claims depending there-from with added limitations are also in condition for allowance

Accordingly, Applicant respectfully requests the withdrawal of the 35 U.S.C. § 102(e) claim rejection of claims 1-4, 9, 16-18, 21-22, 24-26, 29-33, 38, 44-45, and 47.

VII) CLAIM REJECTIONS - 35 USC § 103

Claims 5-6, 14, 34-35, and 43 were rejected for being obvious under 35 USC § 103(a) over Bach and the Official Notice

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taken by the examiner of LEDs. [Office Action, page 9, Section 10]. Applicant respectfully traverses this rejection.

Claims 10-13 and 39-42 were rejected for being obvious under 35 USC § 103(a) over the combination of Bach and US Patent No. 6,123,442 issued to Freier et al. ("Freier"). [Office Action, page 13, Section 11]. Applicant respectfully traverses this rejection.

Claims 19-20, 23, and 46-47 were rejected for being obvious under 35 USC § 103(a) over the combination of Bach and US Patent No. 4,992,704 issued to Stinson. ("Stinson"). [Office Action, page 16, Section 12]. Applicant respectfully traverses this rejection.

The remarks made regarding independent claims 1, 21, and 31 and the anticipation rejection above are incorporate here by reference.

Regarding dependent claims 5 and 34, limitations now added into independent claims 1 and 31 respectively, the Office Action admits that Bach does not disclose "the electrical-to-optical converters being light emitting diodes." [Office Action, page 12, lines 5-6].

However, the Examiner takes Official Notice that the use of LEDs is old and well known in the illumination art" and that "It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute an LED for the light source in the system of BACH et al." [Office Action, page 12, lines 13-16]. Applicant respectfully disagrees.

As discussed previously, Bach's light source 14 is perpendicular to Bach's bar 12 as is illustrated in Bach's Figs. 2 and 4. Simply substituting an LED in the position of Bach's light sources 14,32 would not properly "align the one or more light emitting diodes (LEDs) of the first circuit board with the first opening and the first end of the rotatable acrylic rod" as recited in amended claims 1 and 31. [Claim 1, lines 15-18; claim 31, lines 16-19]. More specifically, such a simple substitution would not place the "optical axis of each of the one or more light emitting diodes (LEDs) substantially in parallel with a central optical axis of the rotatable acrylic rod at the first end" as recited in amended claims 1 and 31. [Claim 1, lines 7-10; claim 31, lines 9-12].

Moreover with LEDs being simply substituted, no longer would Bach's first light source 14 emit[] light in all directions." [Bach, Col. 2, lines 40-41]. Substantial modifications to the physical structures of Bach would be required in order to properly replace Bach's light sources 14,32 with LEDs.

It is not a proper ground of rejection when the "suggested combination of references would require a substantial reconstruction and redesign of the elements." [MPEP § 2143.01, 8th Edition, Rev. 2, May 2004, Pg. 2100-132 and *In re Ratti*, 270 F2d. 810, 123 USPQ 349 (C.C.P.A. 1959)].

Accordingly, Applicant respectfully submits that it would not have been obvious to one of ordinary skill in the art at the time the invention was made to substitute LEDs for the light sources in Bach.

Regarding dependent claims 10-13 and 39-42, the Office Action admits that Bach does not disclose a reflective strip coupled down the length of an acrylic rod as well as other limitations directed to the reflective strip. The Office Action relies on Freier to allegedly disclose such limitations.

The Office Action alleges that Freier discloses "a cylindrical rod, Figure 1, reference number 120". [Office Action, page 16, line 1]. However, Freier does not disclose a "**rotatable** cylindrical acrylic rod" as is recited in Applicant's claims. (emphasis added).

Thus as neither Bach nor Freier disclose a rotatable cylindrical acrylic rod, the combination of Bach and Freier does not disclose a rotatable cylindrical acrylic rod.

To reject a claimed invention for being obvious, "the prior art reference (or references when combined) must teach or suggest all the claim limitations." [MPEP § 2142; 8th Edition, Rev. 2, May 2004, Pg. 2100-128].

Moreover, Freier teaches away from Freier's light fiber being rotatable. Freier's "light fiber 220 may be placed in a bracket or holder 210 having a channel 215 around the light fiber, as shown in FIGS. 4A and 4B." [Freier, Col. 4, lines 42-45]. Freier's "light fiber 220 may be, for example, frictionally fitted or adhesively mounted in the channel 215, so that it **remains in place**." (emphasis added) [Freier, Col. 4, lines 57-59].

"It is improper to combine references where the references teach away from their combination." [MPEP §2145(X.D.2), 8th

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Edition, Rev. 2, May 2004, Pg. 2100-162; citing *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)] "A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." [MPEP §2141.02, 8th Edition, Rev. 2, May 2004, Pg. 2100-127; citing *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984)].

Accordingly, Applicant respectfully submits that it would not have been obvious to one of ordinary skill in the art at the time the invention was made to combine Bach and Freier.

Regarding dependent claims 19-20, 23, 46-47, the Office Action admits that Bach does not disclose limitations of these claims. The Office Action relies on Stinson to allegedly disclose such limitations.

However, Stinson does not disclose a "rotatable acrylic rod" as recited in Applicant's independent claims. Stinson generally only discloses a "variable color light emitting diode". [Stinson, Title].

Thus as neither Bach nor Stinson disclose a rotatable cylindrical acrylic rod, the combination of Bach and Stinson does not disclose a rotatable cylindrical acrylic rod.

To reject a claimed invention for being obvious, "the prior art reference (or references when combined) must teach or suggest all the claim limitations." [MPEP § 2142; 8th Edition, Rev. 2, May 2004, Pg. 2100-128].

As discussed previously, Bach's light source 14 is perpendicular to Bach's bar 12 as is illustrated in Bach's Figs.

2 and 4. Substituting Stinson's variable color LED in the position of Bach's light sources 14,32 would not properly "align the one or more light emitting diodes (LEDs) of the first circuit board with the first opening and the first end of the rotatable acrylic rod" as recited in amended claims 1 and 31.

[Claim 1, lines 15-18; claim 31, lines 16-19]. More specifically, such a substitution would not place the "optical axis of each of the one or more light emitting diodes (LEDs) substantially in parallel with a central optical axis of the rotatable acrylic rod at the first end" as recited in amended claims 1 and 31. [Claim 1, lines 7-10; claim 31, lines 9-12].

Substituting Stinson's variable color LED in the position of Bach's light sources 14,32, no longer would Bach's first light source 14 emit[] light in all directions." [Bach, Col. 2, lines 40-41]. Substantial modifications to the physical structures of Bach would be required in order to properly replace Bach's light sources 14,32 with Stinson's variable color LED.

It is not a proper ground of rejection when the "suggested combination of references would require a substantial reconstruction and redesign of the elements." [MPEP § 2143.01, 8th Edition, Rev. 2, May 2004, Pg. 2100-132 citing *In re Ratti*, 270 F2d. 810, 123 USPQ 349 (C.C.P.A. 1959)].

Accordingly, Applicant respectfully submits that it would not have been obvious to one of ordinary skill in the art at the time the invention was made to combine Bach and Stinson.

Moreover, Applicant believes that it has placed independent claims 1, 21, and 31 in condition for allowance such that claims

depending there-from with added limitations are also in condition for allowance.

Claims 5-6, 10-13, 14, 19-20 depend from independent claim 1. Claim 23 depends from independent claim 21. Claims 34-35, 39-42, 43, and 46-47 depend from independent claim 31.

Applicant believes these dependent claims are in condition for allowance with the independent claims from which they respectively depend.

For the foregoing reasons, Applicant respectfully requests that the Examiner withdraw the 35 U.S.C. § 103(a) claim rejections of claims 5-6, 10-13, 14, 19-20, 23, 34-35, 39-42, 43, and 46-47.

VIII) CLAIM OBJECTIONS - DEPENDENCY

Claims 7-8 and 36-37 were further objected to for being dependent upon a rejected base claim. [Office Action, page 22, section 14].

Claims 7-8 depend from independent claim 1.

Claims 36-37 depend from independent claim 31.

Applicant believes that it has placed independent claims 1 and 31 in condition for allowance such that claims depending there-from with added limitations are also in condition for allowance.

Thus, it is believed that this objection to claims 7-8 and 36-37 is now moot and its withdrawal is respectfully requested.

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IX) CLAIMS WITHOUT REJECTIONS/OBJECTIONS

In the detailed action, Claim 15 was not objected or rejected.

Claim 15 depends from independent claim 1. Applicant believes that it has placed independent claim 1 in condition for allowance such that claims depending there-from with added limitations are also in condition for allowance.

Thus, Applicant believes that claim 15 is also in condition for allowance.

X) NEW CLAIMS

Applicant has added new claims 48-51.

New Claims 48-49 depend from independent claim 1.

New Claims 50-51 depend from independent claim 31.

Applicant believes that it has placed independent claims 1 and 31 in condition for allowance such that claims depending there-from with added limitations are also in condition for allowance. Thus, Applicant believes that new claims 48-51 are also in condition for allowance.

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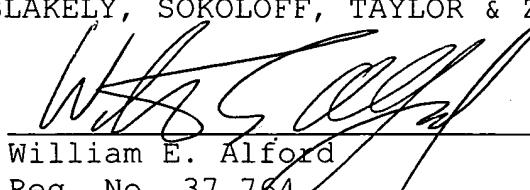
CONCLUSION

In view of the foregoing it is respectfully submitted that the pending claims are in condition for allowance. Reconsideration of the rejections and objections is respectfully requested. Allowance of the claims at an early date is solicited.

The Examiner is invited to contact Applicant's undersigned counsel by telephone at (714) 557-3800 to expedite the prosecution of this case should there be any unresolved matters remaining. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees in connection with the filing of this paper, including extension of time fees, to Deposit Account 02-2666 and please credit any excess fees to such deposit account.

Respectfully submitted

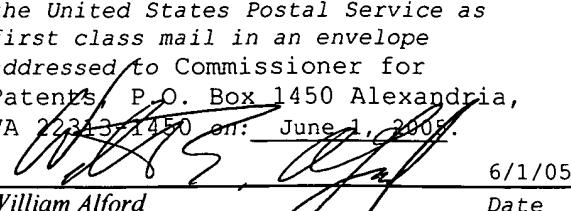
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22343-1450 on: June 1, 2005.



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6/1/05
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